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Hidden Treasures in Forgotten Archives: Exploring the Archaeology of Greek Caves into the archives and the bulletin of the Hellenic Speleological Society

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The Hellenic Speleological Society was founded in 1950 with the aim of exploring and studying the cave forms of Greece. In these 65 years of research more than 10,000 caves have been recorded in the H.S.S. archive. The H.S.S. has also been publishing an annual bulletin on Greek caves since 1950. The archives of the H.S.S. and the Bulletin volumes have been thoroughly researched in order to highlight the archaeological data from the caves from the Neolithic to the Middle Ages. A spatial analysis of the data has provided information about the geographical distribution of the archaeological cave sites in Greece, the type of their uses and the type of the caves that people seemed to prefer to exploit. The main focus is how the caves showcase the different lifeways of their users. Additionally, it demonstrates the actual number of caves that were used in a specific area during a specific era.

Introduction

The speleological research in Greece started systematically at the end of the 1930s when Ioannis Petroheilos surveyed and studied caves on the islands of Kythera and Andros after his geology studies in Paris.¹ His activity was interrupted by the Second World War and the Greek civil war that followed.² Right after the end of the wars, Petroheilos founded the Hellenic Speleological Society H.S.S. in Athens together with his wife Anna and about 30 more people with the aim of recording, exploring, surveying, and scientifically studying the Greek caves.³ In its 65 years of activity, the H.S.S. recorded 11,500 caveforms in its file in every area of the country while an estimated 7,200 recordings were published in its scientific magazine, the Bulletin of the H.S.S. (fig. 1), which was systematically published from 1950 till 2000, as well as in various other nature and scientific magazines.⁴

Due to the fact that the H.S.S. consisted and consists of various scientific experts as well as businesspeople, employees and people who share a passion for caves, the quality of the information on the uses of the caves varies from recording to recording. As a result the obvious uses are recorded more thoroughly than the not so obvious ones. Consequently, the medieval churches, the contemporary sheepfolds, the fortress caves, the houses or even the taverns are almost always noted. On the other hand, uses that concern the prehistoric, the classical and the Roman periods, which require more observation and attention to detail, escape the attention of the exploratory teams most of the time. Another factor which affects the quality of the archaeological research of the H.S.S. is the age that research took over. The recorded information is more analytical and precise as the research and the technology develop over time.

The question, then, is why attention should be paid to a piece of information that is fragmented and not systematic. The first recorded archaeological research in a cave in

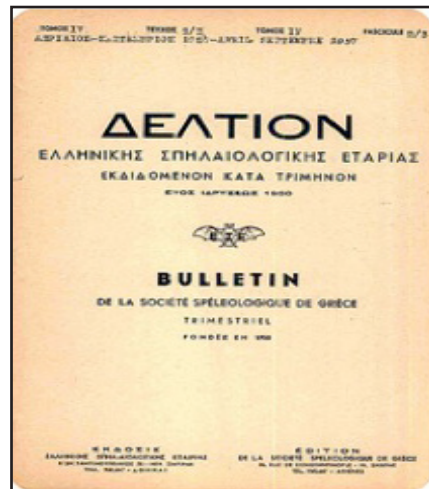


Figure 1: Cover page of the Bulletin of the H.S.S. volume 4 1957.

Greece took place in the cave of Pan in Athens in 1842-1844 by K. Pittakis under the auspices of the Archaeological Society at Athens.⁵ The results of this excavation were published in “*Praktika*,” the Journal of the Archaeological Society (PAE).⁶ The next milestone of the archaeological research in caves in Greece occurred in 1925-1940 when the Austrian doctor and anthropologist A. Markowitz⁷ toured almost all the areas of south Greece and conducted speleological and prehistoric research. Markowitz was killed in a plane accident on the 28th of October, 1941 and as such, the biggest part of his research has not been published. However, Markowitz himself had provided the Anthropological Museum of the University of Athens with a part of his file.

Research in Greek Archaeological caves didn’t accelerate from Markowitz attempts to the end of the Second World War. This change is connected with two scientific programs: the excavations of the American Archaeological School and the University of Indiana in the cave of Franchthi in Ermioni⁸ and the systematic research of Paul Faure in the Minoan caves of Crete.⁹ These two research

projects and their significant results introduced caves to the archaeological discussion on Aegean prehistory in a dynamic new way. The predominant need for their protection and study led to the foundation of the Ephorate of Paleoanthropology and Speleology (EPS) by the Ministry of Culture in 1977.¹⁰ The foundation of the EPS immediately resulted in the increase of archaeological research in the caves of the country. According to the official websites of both EPSs,¹¹ 87 caves with archaeological evidence are published online on the EPS database today.¹² In the online database are presented a short description of the cave along with the archaeological data and the occupation dates. However, only the excavated caves have been added on the database. The information about caves that have been visited and evaluated from the EPS archaeologists are in an unpublished report format. As a result, the number of the caves of archaeological interest, as noticed by the archaeologists of the Ephorates, is far greater.¹³

The Hidden Treasures project

The idea and the objectives

While observing the gap that exists in the knowledge of the use of caves in Greece through time and having established the archaeological information that was never fully exploited¹⁴ in the Bulletin and in the Archive of the H.S.S., it has been decided by the Hellenic Speleological Society Department of Northern Greece and the Cardiff University, to study the published caves and to quantify the archaeological information that could be found.

The research was conducted during the period between March and July 2010 and the data analysis on January 2014. Initially 5,391 caveforms were recorded in a single database. Of these, 5,323 were published in the 22 volumes of the Bulletin of the H.S.S., which are available online either on the website of the H.S.S. in a pdf format¹⁵ or indexed on the website of the library of the Aristotle

University of Thessaloniki, “*Theophrastos*.”¹⁶ The remaining 78 caveforms have been published in various international magazines¹⁷ as well as in Greek magazines.¹⁸ In an attempt to examine the quality of the information that was eventually published, 150 published caves, which seemed not to have any archaeological evidence, were researched as a sample. None of the 150 randomly chosen cases indicated any uses of the cave that had not been included in the published files in their primary archive material. This was particularly encouraging for the outcome of the research since any piece of information that was recorded in the field was at least included in the published forms concerning the respective caves.

The objectives of the project were: a) to record the uses of the caves in Greece over time and to enrich the number of the caves that were used in every period, b) to outline the density of uses in the caves of each prefecture of the country and to observe how it alters through the centuries, and c) to notice quantitative differences in the caves that were used in different environments, such as islands, mainland, and mountains.

The analysis

Three large fields were created for the analysis of the uses of the caves in the database, which included the 5,391 recordings. One field included in general all the caves that had been characterized as caves of archaeological interest when they were published, a second field that included the caves that had been characterized as caves of “Christian worship,” and the third field included the caves that had been characterized for the contemporary uses. Obviously one cave could belong to more than one field. Afterwards, more specific characteristics were indexed, such as caves that had been used prehistorically, caves with indications of usage in the classical and post-classical/Roman period, church-caves, barn-caves, caves that had been turned into wineries, olive mills, creameries, or storage areas, as well as a last category for any other use.¹⁹

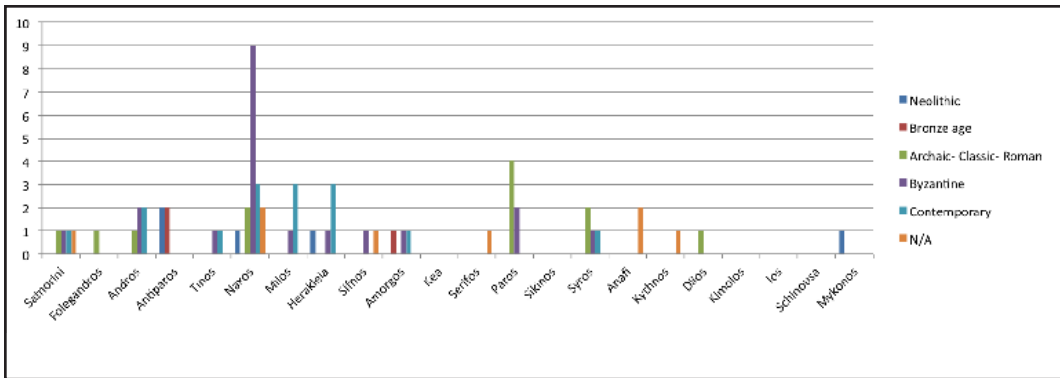


Table 1: Histogram presenting the distribution of the archaeological caves in Cycladic islands.

An attempt was made to map the data that was derived from the quantification of the uses of the caves initially with reference to the 12 districts of the country and then, in the case of the Cyclades, with reference to the uses per island (table 1). The data is not entirely representative in the case of the spatial distribution of uses. Southern Greece features many more recordings than the districts of Thessaly, Epirus and Macedonia-Thrace. The main reason for this is that until 1990 and the foundation of the Department of Northern Greece, the H.S.S. did not maintain a team based in northern Greece, and as a result the speleological expeditions were limited mostly to Sterea Ellada, Peloponnese, the Aegean islands and Crete.

The indexing revealed 397 caves with indications of human uses, which constitute the largest database in Greece. The second largest database is the one by the Ministry of Culture with eighty-seven caves. It is the first time that information has been collected from caves with modern and contemporary uses in a general recording and a comparison has been drawn between these uses and the caves that were respectively used in the historic and prehistoric period.

Plotting the archaeological evidence

The caves were then categorized according to the period of time in which they were used

and the use that was recorded, in each case this information could be verified with the publication or the archive information. As such the following categories were created: Paleolithic, Neolithic, Bronze Age, Classical, Roman and Late Antiquity, Byzantine and Post-Byzantine period, more recent and modern uses (table 2). Furthermore, the type of the cave,²⁰ the kind of the use (table 3), and the geographic region where the cave is located were recorded as well. Finally, a comparative analysis was conducted in order to observe whether there was some connection between the use of the cave and its type, the use per period of time and the use per geographic region.

Unfortunately, in many cases while the research teams observed the traces of human uses and recorded the presence of *surface ceramics*, they did not add the dating of these uses and/or the type of the uses to the published work. Consequently there is only some dating for 290 out of the 397 recordings whereas there is information on the type of use only for 216.

Prehistory

Out of the 397 recordings, only one of them dates back to the Paleolithic. It is the rock shelter in Kleidi. On the contrary there are twenty caves whose uses date to the Neolithic and one cave whose use dates to the Bronze Age.²¹ Although the caves Franchthi in Argolida

and Theopetra in Trikala feature Paleolithic deposits, they are recorded only with reference to the Neolithic. At the same time the absence of more caves with evidence from the Bronze Age, particularly because of the intense activity of the teams of the H.S.S. in Crete, where the caves with Minoan indications are quite common,²² is striking.

Classical, Roman and Late Antiquity

The recordings of the historic period are clearer. Forty-six recordings, including some of the most famous archaeological caves and rock shelters in Greece,²³ indicate use during the Classical and Roman eras. Moreover as far as dating is concerned, they are the first caves whose use is recorded. In fact six of them were characterized as “oracles.”²⁴

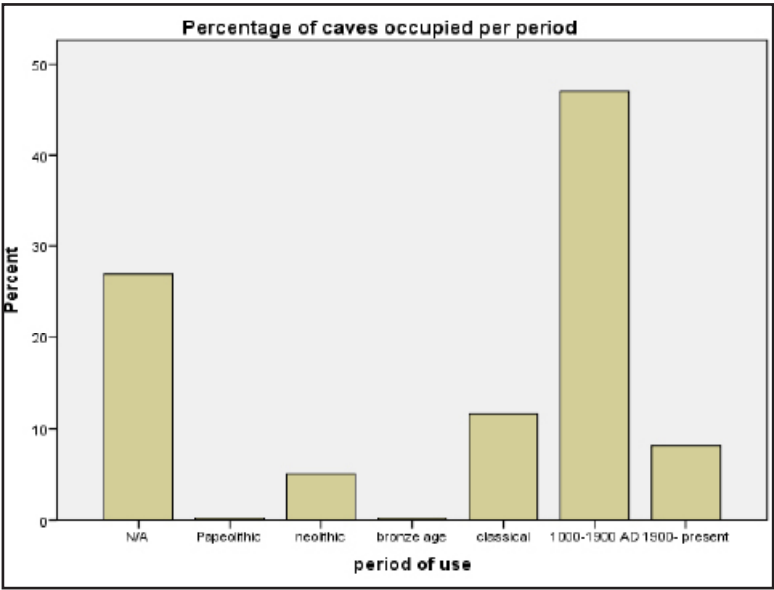
Byzantine and Ottoman

The majority and most complete information derive from the recordings with regard to the caves of the Byzantine, Post-Byzantine and Ottoman eras. In particular, these are caves that have been turned into churches since the 11th century C.E. This practice is common in every region of the country and it presents some specific characteristics. Unfortunately,

complete studies have not been conducted. Only some research with a local interest has been carried out, such as the research in the caves of Megali Prespa and the church caves in Kythera.²⁵ In the Bulletin of H.S.S., 187 caves were published which indicate uses that were related to the Christian worship and cover the period between 1000 C.E. till 1800 C.E.. 175 out of these include buildings and constructions that could be just an altar or even whole complexes of churches.²⁶

Three architectural types of churches are identified in the caves; the Independent one where the church is a separate construction that is just an extension or the whole of the interior of a cave, the Semi-Independent one where the church uses a part of the cave as a wall or a ceiling or both and finally the Dependent one where there is no construction and the cave itself is the church with an addition of a High Altar and in some cases of a Templar. Ninety-three out of the 178 caveforms that have been turned into Christian churches are caves and 71 of them are rock shelters, eight of which are recorded as artificial caves and five as marine caves. Even in the cases when the sacred churches are in caves, only the area close to the entrance is used as opposed to the entire cave.

Table 2. Percentage of caves occupied per period.



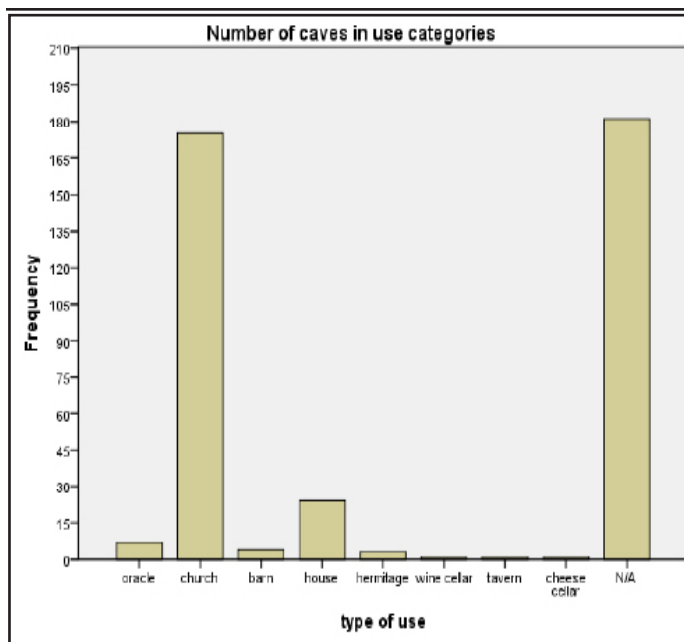


Table 3. Numbers of caves per type of use.

Contemporary uses

Perhaps the most significant contribution of the caves published in the archive of H.S.S. is the recordings that regard modern uses of the caves. At this point it is worth mentioning that the research teams often omitted uses that could not be considered as archaeologically important.²⁷ Taking this into account, many caves that had been turned into barns, for instance, were not recorded. As such, only when we visit these caves today do we observe that even now they are being used periodically or seasonally by shepherds for animal housing. On the whole, 32 caves with modern uses were recorded for the first time. Twenty-four are referred to as residences, four as barns, one as a wine cellar, one as a cheese dairy and one as a tavern; there is one more cave in the area of Perissa in Santorini whose use has not been recorded.

Type of recorded caveforms

After the indexing, 246 out of the 397 recordings concern horizontal caves and 116 concern rock shelters. Nine recordings present activities in marine caves and 16 in artificial caves. Moreover there are 10 potholes in which human uses are recorded.

Discussion

The first significant contribution of the present research is the increase of the known caves with evidence of use in Greece. By adding the 397 caves to the eighty-seven that are available through the Ephorate of Speleology and by subtracting the double recordings, a total of 452 caves with an archaeological interest in Greece is produced. In a country with approximately 10,500 recorded caveforms, the 452 caves represent 4.3%. This percentage rises to 8.3% if it is calculated in the ensemble of 5,391 published caves. However the actual number of caves that are used by humans in Greece in various periods seems to be larger. By examining this data as compared with the data that has been produced by field research in order to locate archaeological caves, it is observed that the actual percentage of the caves that were used in some way in relation to the absolute number of the recorded caves varies from 35% to 45% in the case of the Cerigo Speleological Project and in some cases it reaches an impressive 85-90%.²⁸ Generally, the speleological field research with an archaeological orientation are often absent in Greece and as such it is not possible to reach solid conclusions from the fragmentary research mainly on islands.

The examination of the recordings of the uses of caves that are published in the Bulletin of H.S.S. may not contribute information on prehistory but add caves that are not known in the archaeological research nowadays. The continuity of uses in Greek caves can be easily observed by comparing the modern uses for productive procedures, animal housing, storage and Christian worship with historic and prehistoric uses over time, it can be noticed that little has changed with regard to the uses of caves since the Neolithic period.²⁹ In the Neolithic, caves seem to have been preferred to rock shelters, since there are three cave sites for every rock shelter site. Whether there is a correlation between cave use and the type of cave formation and whether there are environmental factors that influence this choice³⁰ are two questions that are still open for discussion.

The research has advanced our knowledge a lot as far as the Classical and Post-Classical periods are concerned. More specifically, about 120 caveforms are considered to present uses according to the catalogue published by Katja Sporn.³¹ However, three of the caves that are published in the Bulletin of H.S.S. as oracles are missing from the Sporn's catalogue.³² Another conclusion that can be drawn by the caves that are published in the Bulletin of the H.S.S. is that in the Classical period there seemed to be a preference for the use of caves over rock shelters.³³ Since most of the caves in the Classical period were considered to be sacred, this might be related with the choice of caves and the feeling of transcendence and spirituality that is caused by the dark, humid and cold environment of the cave.^{34 35}

The actual contribution of the indexing of the caves with archaeological evidence is the recording for the first time of 178 caveforms that had been turned into churches or hermitages. Only fragmented attempts had been made so far in order to study cave churches in context such as the cases of the studies in Kythera or in Santorini.³⁶ On the other hand, the use of the caves in the Middle

Ages and in more recent years is absent from the complete volume of cave archaeology in Greece.³⁷ If someone travels in Greece, they may easily notice that churches in caves are a common sight and that in most cases they are still being used. For instance, Mass takes place once or twice a year while at the same time wedding ceremonies and christenings take place in the interior of the caves in many cases. The beginning of this phenomenon dates back to the 11th century C.E. with the simultaneous development of monasticism.³⁸ However, even researchers who identified the continuity in cave using³⁹ did not study the modern uses accordingly.

The fact that there is no emphasis on the use of a particular type of cave as opposed to another one (rock shelter instead of a cave for instance) possibly highlights a practice of cave use mainly on the grounds that it offered concealment and economy of structural material. In the case of the use of caves with a dark micro-environmental zone, it can be assumed that people consciously chose to utilize the distinct characteristics of this zone: stable temperature, high humidity and absolute darkness.

A simple indexing cannot lead to conclusions concerning the reasons why people chose to build churches in caves after the 10th century C.E. Excluding the cases of hermitages, where isolation is a priority,⁴⁰ the concealment from possible enemies, the fact that the interior of the caves could easily be structured, as well as the spirituality of the caves with the mystical twilight are perhaps some of the reasons that urged people to use the caves for their ideological expression and for worshipping during troubled times. What is absent from the medieval and more recent uses is the recording of uses related to economy and production. The simplest explanation is that the research teams only recorded the churches that could be easily identified and did not record the uses that required study of ceramics and other finds.

Conclusion

In conclusion, the indexing offers significant information for an initial overview of the use of the caves from the prehistory till today in the Helladic area. The continuity of the uses of the caves is noted for the same reasons (production, residence, worship, ideological expression) with similar strategies (choice and layout of the space according to the needs that should be met). It is worth mentioning that even the simple recordings showcase the role that the cave itself plays in these uses. The number of the caves that are known for their human uses has been quadrupled and new opportunities have been born for a more intensive field research. This research attempt requires a large-scale in-cave surface research in order to identify the occupation sequence of the caves, the current use of the place and the different micro-environmental characteristics of each site. Although no new uses have been brought to light, it is the first time that the already known uses has been categorized and a long-term picture of the uses of Greek caves and how they alter over time has been revealed.

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Endnotes:

- 1 Ioannou 2000; Trimmis & Karadimou 2013
- 2 Ioannou 2000
- 3 Ioannou 2000
- 4 e.g. Ekdromika Chronika, Archaeologiko Deltion
- 5 Trimmis 2013
- 6 Trimmis 2013
- 7 Ioannou 2000
- 8 Jacobsen 1969
- 9 Faure 1994
- 10 Trimmis 2013
- 11 http://www.yppo.gr/1/g1540.jsp?obj_id=2465 [accessed 10 November 2014] http://www.yppo.gr/1/g1540.jsp?obj_id=2466 [accessed 10 November 2014]
- 12 There is no data available about how often the EPS databased has been updated. Last update was on 2012.
- 13 Mavridis and Tae Jensen 2013
- 14 The most of the excavated caves in Greece, initially has been explored and evaluated from the H.S.S. and published at the Bulletin (e.g; Skotini, Saracenos, Aggitis, Alepotrypa).
- 15 http://ese.edu.gr/default.asp?V_DOC_ID=2132 [accessed on 11 November 2014]
- 16 <http://geolib.geo.auth.gr/> [accessed on 11 November 2014]
- 17 e.g. Spelunca [vols of 1911 and 1912], Annals de Speleologia [vols 1951-1962]
- 18 Pan [issues of 1949-1958] and Vouno [issues of 1936-1959]
- 19 For instance the cave Galaxidi in Galaxidi in Fokida [no 4460] that had been turned into a tavern during the decades of 80's and 90's
- 20 If the cave is horizontal, vertical, marine or artificial
- 21 The cave of Nestoras in Voidokilia in Messinia.
- 22 Faure 1994; Platon 2013
- 23 E.g. caves of Pan and Nympholiptos in Attica, Chrysospilia in Folegandros island.
- 24 Amphiarao in Attica, Artemidos and Irakleous in Achaia, Trofoniou in Boeotia, Apollonos in Cyclades and Ieron Kleas in Lakonia.
- 25 Trimmis & Filippatou 2011
- 26 Semoglou 2000.
- 27 It was common in 20th century Greek archaeology do not take into account any evidence after the fall of the Byzantine Empire (1453).
- 28 Trimmis & Karadimou 2013
- 29 Trantalidou et al 2010; Similar uses have been identified from Neolithic to Modern eras. Caves used as shelters, barn places, storage areas, ritual sites or places for ideological expression.
- 30 temperature, humidity, light
- 31 Sporn 2013
- 32 Amphiarao in Attica, Artemidos and Irakleous in Achaia
- 33 Thirty-one out of the forty-six recordings, or 67.4% referred to as caves)

- 34 Ustinova 2009
- 35 For the geological difference between a cave and a rock-shelter refer on: Romero 2009. *Cave Biology*. Cambridge University Press.
- 36 Semoglou 2011; Demaria 2001
- 37 Mavridis and Tae Jensen 2013
- 38 Semoglou 2011
- 39 Such as Trantalidou et al 2010; Sampson 2007
- 40 Semoglou 2011

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